

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A component, comprising:

a functional layer;

a surface micromechanical structure produced in the functional layer and including movable elements and immovable elements;

at least one electrically non-conductive first insulation layer;

at least one first sacrificial layer; and

a substrate to which is connected the functional layer via the at least one electrically non-conductive first insulation layer and the at least one first sacrificial layer, wherein:

the movable elements are exposed by partially removing the at least one first sacrificial layer in the area of the movable elements, and

the at least one electrically non-conductive first insulation layer includes a material that is substantially not attacked in the removing of the at least one first sacrificial layer.

2. (Currently Amended) The component as recited in Claim 1, further comprising:

an electroconductive layer that is structured and that is contactingly situated vertically between the at least one electrically non-conductive first insulation layer and the at least one first sacrificial layer.

3. (Original) The component as recited in Claim 1, further comprising:

at least one membrane layer arranged over the surface micromechanical structure, the at least one membrane layer being mechanically connected to the substrate via at least one of the immovable elements;

at least one second sacrificial layer arranged between the functional layer and the at least one membrane layer; and

at least one second insulation layer arranged between the at least one of the immovable elements and the at least one membrane layer, wherein:

the movable elements are exposed by removing the at least one second sacrificial layer, and

the at least one second insulation layer includes a material that is not substantially attacked by the removing of the at least one second sacrificial layer.

4. (Original) The component as recited in Claim 3, wherein:

the at least one electrically non-conductive first insulation layer and the at least one second insulation layer are located only in areas of the immovable elements.

5. (Original) The component as recited in Claim 1, wherein:

the at least one first sacrificial layer is removed at least in areas of the immovable elements, and

the functional layer in the areas is in direct contact with a layer situated underneath the at least one first sacrificial layer.

6. (Original) The component as recited in Claim 3, wherein:

the at least one second sacrificial layer is removed at least in areas of the immovable elements, and

the at least one membrane layer in the areas is in direct contact with the at least one second insulation layer.

7. (Original) The component as recited in Claim 3, wherein:

the at least one of the immovable elements includes at least one electrode, and

the at least one electrode is electrically contactable via the at least one membrane layer in that the at least one second insulation layer has at least one contact hole in an area of the at least one electrode through which the at least one membrane layer is in direct contact with the at least one electrode.

8. (Previously Presented) The component as recited in Claim 3, wherein:

the at least one first sacrificial layer and the at least one second sacrificial layer include silicon oxide, the silicon oxide being removed using an HF etching medium, and the at least one electrically non-conductive first insulation layer and the at least one second insulation layer include one of silicon nitride and silicon carbide.

9. (Original) The component as recited in Claim 3, wherein:

the at least one electrically non-conductive first insulation layer and the at least one second insulation layer include silicon nitride having a silicon content greater than 42%.

10. (Withdrawn) A method of manufacturing a component having a surface micromechanical structure that includes movable elements and immovable elements, comprising:

applying at least one first electrically non-conductive insulation layer to a substrate;
producing at least one first sacrificial layer over the at least one electrically non-conductive first insulation layer;
producing a functional layer over the at least one first sacrificial layer;
defining the surface micromechanical structure in the functional layer; and
exposing the movable elements by removing the at least one first sacrificial layer,

wherein:

the at least one electrically non-conductive first insulation layer includes a material that is not substantially attacked by the removing of the at least one first sacrificial layer.

11. (Withdrawn) The method as recited in Claim 10, wherein:

the at least one electrically non-conductive first insulation layer remains at least in areas of the immovable elements.

12. (Withdrawn) The method as recited in Claim 10, wherein:

the at least one first sacrificial layer is removed in areas of the immovable elements.

13. (Withdrawn) The method as recited in Claim 10, further comprising:

producing a first electroconductive layer over the at least one electrically non-conductive first insulation layer, the first electroconductive layer being structured prior to producing the at least one first sacrificial layer.

14. (Withdrawn) The method as recited in Claim 10, further comprising:

producing at least one second insulation layer over the surface micromechanical structure;

producing at least one second sacrificial layer over the at least one second insulation layer;

removing the at least one second sacrificial layer at least in an area of one of the immovable elements;

producing at least one membrane layer over the at least one second sacrificial layer;

structuring the at least one membrane layer to include openings at least for removing the at least one second sacrificial layer and the at least one first sacrificial layer; and

removing at least the at least one second sacrificial layer, wherein:

the at least one second insulation layer includes a material that is not substantially attacked by the removing of the at least one second sacrificial layer.

15. (Withdrawn) The method as recited in Claim 14, wherein:

the at least one second insulation layer only remains in areas of the immovable elements.

16. (Withdrawn) The method as recited in Claim 14, wherein:

the at least one second sacrificial layer is removed at least in areas of the immovable elements in order to apply the at least one membrane layer directly to the at least one second insulation layer in the areas.

17. (Withdrawn) The method as recited in Claim 14, further comprising:

producing at least one of the immovable elements as at least one electrode; and

producing at least one contact hole in the at least one second insulation layer in an area of the at least one electrode so that the at least one membrane layer can be applied directly to the at least one electrode in the area, and a contact with the at least one electrode via the at least one membrane layer is achieved.

18. (Withdrawn) The method as recited in Claim 17, further comprising:

producing openings in the at least one membrane layer through which an electrical connection of the at least one electrode to the at least one membrane layer is electrically insulated from other areas of the at least one membrane layer.

19. (Withdrawn) The method as recited in Claim 10, wherein:

the at least one first sacrificial layer and the at least one second sacrificial layer include silicon oxide, the at least one electrically non-conductive first insulation layer and the second insulation layer include one of silicon nitride and silicon carbide, and

the at least one first sacrificial layer and the at least one second sacrificial layer are removed using an HF etching medium.

20. (Currently Amended) A component, comprising:

a functional layer;

a surface micromechanical structure produced in the functional layer and including movable elements and immovable elements;

at least one electrically non-conductive first insulation layer;

at least one first sacrificial layer, ~~wherein material of the at least one first sacrificial layer has different physical properties in comparison to material of the at least one electrically non-conductive first insulation layer~~; and

a substrate to which is connected the functional layer via the at least one electrically non-conductive first insulation layer and the at least one first sacrificial layer, wherein:

the movable elements are exposed by partially removing the at least one first sacrificial layer in the area of the movable elements, [[and]]

the at least one electrically non-conductive first insulation layer includes a material that is substantially not attacked in the removing of the at least one first sacrificial layer, and

the component includes at least one area where: the at least one electrically non-conductive first insulation layer is arranged over the substrate; a conductive layer is

arranged over the at least one electrically non-conductive first insulation layer; and the at least one first sacrificial layer is arranged over the conductive layer.